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ABSTRACT

The paper reviews the history and current status of special education research and programs in New Zealand. Separate sections address studies of the preschool level (such as early intervention); school aged level (touching on such topics as parent involvement, eligibility criteria, and social development); and postschool level (on adjustment of older handicapped persons). Problems and issues mentioned in the current state of the art include the domination of research by university personnel, the difficulty of obtaining research oriented journals by special education teachers and administrators, and the gap between educational researchers and practitioners. (CL)

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Research on Special Education in New Zealand

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Special education is usually defined as provisions made for children on the basis of particular and atypical physical or behavioural characteristics they have or manifest. Most current and widely used special education textbooks adopt such a definition, and Havill and Mitchell's (1972) book - so far the only general New Zealand reference book in this area, is no exception:

Special education refers to the facilities, materials, and teaching resources provided for children who because of exceptional physical, intellectual, emotional, or social characteristics, can not receive maximum benefit from a regular school programme.

There is nothing wrong with defining special education in this way. Indeed the fact that a number of children have or show exceptional physical or behavioural characteristics (or can be reliably predicted to do so) is the very foundation upon which special educational provisions are planned and made. What needs equal recognition, however - and is frequently overlooked, is that such provisions will be necessary to the degree that regular classroom provisions are inadequate to accommodate children with special needs. It is possible - indeed probable, that many children are

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receiving special educational provisions mostly because of the inadequacies of their particular school/classroom situation and not *primarily* because of any special teaching needs they may have. In this sense, special educational services can be viewed as a type of 'Band-Aid' facility - available when regular class provisions are inadequate for particular children because of inadequacies on the part of the teacher (i.e., in teaching ability, understanding of the special needs and learning/behavioural characteristics of the children concerned, etc.) or inadequacies in resources available to the teacher (i.e., equipment, time, etc.). The fact that it is very difficult to ascertain in any particular case whether a child is receiving special education primarily because of characteristics he/she has or primarily because of characteristics or resources his/her teacher does not have, makes it very difficult to specify the special educational needs of such children, or to design or evaluate special educational provisions vis-à-vis the needs of the children concerned.

The historical background to, and development of New Zealand special educational provisions and relevant special educational research up until approximately 1970 have been described and discussed in Havill and Mitchell (1972). The present paper is concerned with research on New Zealand special education in the years since 1970. At that date the New Zealand Department of Education offered a sizable array of special educational services and provisions, with 11,614 pupils (2.17 percent of the total state school population) receiving special educational help (excluding those in receipt of visiting teacher or guidance services). In December 1978 the total number and percentage of pupils in state primary and secondary schools receiving special educational help (apart from guidance or visiting teacher services) had increased to 15,831 and approximately 2.24 percent respectively, but apart from a change of terminology for blind and partially-sighted children (now called visually handicapped children) and the establishment of facilities for a number of small groups of preschool educationally handicapped children and 'children with special needs' the nature and overall distribution of services in 1978 seems closely comparable with that of 1970. McAlpine and McGrath's (1972) suggestion with respect to provisions for gifted children in New Zealand, i.e., that

'nonprovisions' might well be a more appropriate term still seems conspicuously apt. Similarly, Clay's (1972) observation that 'the concept of learning disorders has not yet made a significant impact on New Zealand education', seems appropriate with respect to extant special educational provisions for children with major specific learning difficulties - a group who comprise approximately 7 percent of the school population according to most overseas estimates and a recent New Zealand survey by Walsh (1979).

As in most other Western countries, special educational provisions are available in New Zealand public schools for children who show social or emotional maladjustment, mentally retarded children, and children with speech, hearing, visual or physical handicaps or severe reading difficulties. Special educational facilities tend to be concentrated in major cities, although through various combinations of hostel accommodation and transport arrangements, etc., most New Zealand children who require special education are probably able to be accommodated in public schools. Moreover correspondence school and visiting teacher services are available for children living in remote areas who can not be transported or accommodated in a hostel, or for children unable for any reason to attend a public school.

It is much easier to discuss the range and types of special educational provisions available (this information is ably catalogued each year by the New Zealand Department of Education) than it is to specify what is 'special' about such provisions. As long as the *raison d'etre* for special educational services is perceived by the educational community as exclusively the consequence of the specialness (= difference) of children the need to make such specifications may not be readily apparent. From this perspective children who 'do not fit' the 30-40 pupils per teacher regular education system would be likely to be viewed as being in need of accommodation elsewhere, with lower teacher-pupil ratios and modifications of the curriculum and teaching methods to accommodate their particular learning and behavioural difficulties. Indeed something like this view has probably underpinned the development of special educational services in most countries including New Zealand, and more importantly for present purposes such a view has almost certainly influenced (and perhaps attenuated) the development of

special educational research. On paper, lists of 'special' educational facilities and provisions appear to constitute a 'special' educational system and while in New Zealand as elsewhere it has probably been prudent for educational administrators and politicians to adopt the Queen of Hearts dictum, viz., 'if we choose to call services special, they are special', and not to dwell on what might be perceived in some quarters to be academic issues, such as delimiting the 'special' characteristics of special educational provisions, the question of the effectiveness of such provisions must ultimately be addressed.

While evaluations of traditional special educational provisions in overseas countries have shown noticeably mixed results, a positive relationship is apparent between the quality of programme input and the extent of progress of the children concerned (Kirk & Gallagher, 1979). At the same time it is unfortunately the case that very often the quality of the programme input has not been high (Milofsky, 1975) - a point documented in many evaluation studies of special educational provisions and a point grasped by many parents (typically through N = 1 case study data). The result has been a dissatisfaction with traditional special educational provisions on the part of parents and special educators and pressure (at times exerted via legal and fiscal means) to abandon many of the traditional strategies in favour of mainstream special educational provisions. When the Band-Aid function of special educational services is acknowledged, however, it is patently clear that mainstream special educational facilities can not be considered in isolation from the quality of extant regular class provisions and can not be expected to be any better than traditional facilities unless such mainstream facilities are in fact (as well as name) special. If the specialness of mainstream special educational facilities is to be assured, requisite competencies, strategies and resources of regular class teachers will need to be identified and developed. Given the probability that many regular class teachers and classroom situations are already conspicuously wanting in some or all of these respects, the development of effective mainstream special educational facilities seems likely to be a decidedly long-term venture.

It is difficult to separate research on the education of children from research into other aspects of their growth and development, or

to arrive at a sensible basis for distinguishing between research which is primarily of educational interest and other research which although relevant to education is primarily of medical, social work, psychological, or sociological interest. This difficulty is greatly exacerbated in special educational research, since medical and/or family/social work problems are practically a sine qua non of special educational needs. It seems appropriate in view of the nature and objectives of NZARE to focus on research (i.e., empirical research) of direct relevance to New Zealand special education. In the present review, attention will thus be confined to those studies which are concerned specifically with the behavioural characteristics of children with special educational needs (and/or of their parents or their teachers) as these relate to current or planned special educational provisions; or with the classroom or playground behaviour of preschool or school-aged children with special educational needs (or of their teachers); or with the effects of special educational strategies. Such a focus in the present review will preclude consideration of psychological studies which deal with various aspects of learning and behavioural characteristics in handicapped groups (effects of operant procedures with mentally retarded children, studies of verbal functioning in the mentally retarded, visual-form perception in cerebral palsied children, etc.) or studies of children in hospitals or other institutions. A large number of theses have been concerned with such questions in the past decade (Pickens, 1975, 1976a, 1976b, 1979). It is not that these studies are considered irrelevant to special education - clearly they are relevant. Rather, the intention is to focus on research *directly* and specifically concerned with special educational conduct and effectiveness. Studies will be grouped in three areas: preschool, school years, and postschool.

Preschool Studies

The lack of research on atypical preschool children was noted and deplored by Barney (1972) and while several studies have been conducted in the past decade, the current sum of knowledge in this area is noticeably slim. The relative lack of research attention to the preschool years may be related to the fact that preschool education is

neither compulsory nor a direct state responsibility in New Zealand, and currently reaches only about half of the nation's preschoolers (Barney, 1975). Indeed, it seems likely that current educational and social policy and the research situation both reflect the predominance of a view of early childhood as 'something less than crucial' on the part of the educational and wider community.

The current provisions for handicapped children have been discussed by Barney (1977, 1978) and clearly a wide range of provisions is available with noticeable variation in the objectives of programmes offered, and in the training of teachers/helpers etc., and conspicuously little information on the conduct or effectiveness of extant provisions. Panckhurst (1977) undertook a national survey of the special educational needs of kindergarten pupils. It was found on the basis of teachers' ratings that approximately 11 percent of the kindergarten population had special educational needs. Considerable variation was evident in the incidence of particular handicapping conditions with speech/language difficulties, behavioural maladjustment and severe developmental lag being the most frequently noted problems. Noticeably more boys than girls were reported to have special needs (the rate was almost 2:1) - a characteristic finding in surveys of special educational needs at all age levels.

A survey by Hallinan (1978) of a group of 94 Christchurch families with handicapped children (including intellectually handicapped, physically handicapped, multiply handicapped, deaf, asthmatic and autistic children) indicated that approximately 75 percent of the parents whose children had attended regular preschools were reasonably happy with the services their children had received. A similar result was obtained from parents of children who had attended a special preschool. The author noted Barney's (1974) estimate that probably less than 1 percent of handicapped 3 to 4 year-olds attend regular preschools, and observed that the generalizability of the results would almost certainly be very limited - a caveat which must also be applied to Panckhurst's (1977) data. It is also not clear from the Christchurch study what parents were 'satisfied' with, nor what can be deduced from the obtained results - possibly that New Zealand parents are grateful for small mercies. It would certainly be most unwise to interpret the results as a vindication

of extant provisions. There is a need to determine what the special educational needs of preschool handicapped children are, to examine what is happening in current preschool educational facilities, and to assess the situation in these terms.

Clearly the special educational needs of preschool handicapped children will vary greatly depending on the type and extent of their disabilities and the adequacy of their home and family situations, etc., and such variability will need to be heeded in planning and evaluating provisions. An example of the type of research needed in this area is that of Pearl (1973) who examined the intellectual and physical characteristics of preschool age spina bifida children, and the attitudes of their mothers. In general the children were of low average intellectual ability, paralyzed to some degree, and liable to be incontinent, and the attitudes of the mothers towards their children were noticeably more strongly influenced by their religious beliefs than by the severity of their child's handicap. The results underline the variability in the children's abilities and difficulties and home backgrounds, which must be accommodated in planning preschool services for this group.

A similar survey was undertaken by Wilson (1975) of the mothers of 5 to 10 year-old cerebral-palsied pupils of special day-schools. The mothers were evenly distributed across the SES spectrum and in comparison with mothers in the general population, were slightly older and showed a higher incidence of still-births. The majority of the mothers had very favourable attitudes towards disabled persons and the attitudes of the mothers did not seem to be related to their religious beliefs or to the age of their children. In view of the probability that family difficulties with physically handicapped children would be somewhat different although as great (if not greater) during the preschool years, a replication of this study with preschool cerebral-palsied children would seem a useful endeavour.

An additional factor which will need to be considered carefully in formulating social policy/provisions is the possibility of additional financial stress in families with preschool (and/or older) handicapped children. A study by Brewer (1973) showed that families with a handicapped child (especially those with an intellectually handicapped or physically handicapped child) were shouldering a greater financial

burden than families without a handicapped child. The greater burden derived from additional costs associated with transportation (to school, hospital, etc.), medical fees, appliances, and additional food and clothing. The financial difficulties of families of intellectually handicapped children (and adults) was also documented in a major epidemiological survey by Morrison, Beasley and Williamson (1976). A significant relationship was found between the incidence of additional expenses and the severity of retardation of the intellectually handicapped person. Additional financial support for families of intellectually handicapped children (and adults) thus seems strongly indicated.

A study of social participation in current preschool facilities for intellectually handicapped children was made by Wilton and Densem (1977). It was found that the levels of social participation of intellectually handicapped children in regular preschools were conspicuously greater than those of intellectually handicapped children in special (segregated) preschools but were closely comparable with those of their nonhandicapped classmates. The results suggested that segregated preschool attendance may exacerbate the social learning difficulties of intellectually handicapped children. It needs to be noted as it was by Barney (1977) that the location of handicapped children in mainstream preschool educational provisions is unlikely to be beneficial to handicapped children unless regular preschool teachers feel and are competent to accommodate such children and unless additional resources necessary to accommodate such children are provided. At the same time, the potency of 'setting effects' on the behaviour of children (and teachers) needs to be understood - and indeed utilized. The social development of handicapped children is important as is their acceptance by nonhandicapped children (and their parents and teachers). If these characteristics are easier to foster in mainstream special educational facilities, as seems likely, the development (including evaluation) of such facilities needs to be given higher priority than is apparently the case at present.

Apart from the arguments and policy changes arising from mainstreaming issues, the whole area of preschool education for handicapped children is in the throes of a virtual revolution following the development of a number of effective early intervention programmes. The term

'early intervention' covers a diverse range of home and/or community-based early childhood programmes. Early intervention programmes for handicapped and high-risk children necessarily involve a pedagogical aspect, where an attempt is made through didactic teaching or sequences of planned learning experiences to facilitate the child's cognitive and/or social development. Frequently, such programmes also involve the provision of direct family support services (nutrition supplements, medical care, social worker support, etc.) and in some cases parental education/training in home-making, child rearing, job rehabilitation skills, etc. To date, such programmes have been developed mostly for intellectually handicapped and mildly retarded children (Tjossem, 1976) and most programmes have been developed in the United States (Wilton, 1979b) although several carefully researched Australian programmes have also emerged (e.g., Thorley & Woods, 1979, Clunies-Ross, 1979). A number of the programmes developed thus far have been shown to be highly effective in promoting the intellectual and social development of the children, the most impressive results to date being achieved with cultural-familial mentally retarded children (Garber & Heber, 1977) and Down's syndrome children (Hayden & Haring, 1977).

It is clear that the gains from early intervention programmes will be a function of programme quality and appropriateness, as several writers have noted (e.g., Bronfenbrenner, 1974; Caldwell, Bradley & Elardo, 1975) and that neither of these characteristics can be assured without thorough background research into the particular developmental and/or family difficulties of the children concerned - and into the effectiveness of particular teaching strategies and learning activities. Several early intervention programmes for intellectually handicapped children have been established in New Zealand viz., The Dawnstart Project (Straton, 1977), Project PATH (Mitchell, 1979) and The Mangere Early Intervention Programme (Pook & Singh, 1978). An evaluation of the effects of the Mangere programme (Howden-Chapman, 1979) indicated that two of the five children included in the programme at that time had made very substantial intellectual and social gains, and in three cases the mothers of the children showed significant and positive changes in their interactions with their intellectually handicapped child. It is to be hoped that the thorough development

of effective early intervention provisions for intellectually handicapped children and other handicapped children will continue and that early intervention does not degenerate into yet another 'educational fad' which it surely will if programmes are not carefully implemented, thoroughly evaluated, and where necessary, modified accordingly (Marsh, 1977; Wilton, 1979b).

A series of studies in Christchurch has been concerned with cultural-familial mentally retarded children. These children who come almost exclusively from low SES homes, constitute approximately 75 percent of all mentally retarded children and it seems clear that cultural-familial mental retardation can be offset (at least to a degree) if an appropriate early intervention programme is instituted at an early age and continued beyond the preschool years, and that the effectiveness of such programmes is enhanced if the programme is also focused on the home and family background of the child. Such a focus is necessarily blurred at present since relatively little is known (specifically) about the home and family backgrounds of cultural-familial mentally retarded children (Wilton, 1979a). The objective of the Christchurch studies has been to aggregate baseline data on the home and family backgrounds of cultural-familial mentally retarded children as a basis for the development of an early intervention programme. A study by Wilton and Barbour (1978) indicated that children at high-risk for cultural-familial mental retardation (siblings of special class pupils), in comparison with other low SES children, interacted less often with their mothers and spent less time in activities most likely to yield cognitive development. The mothers of the high-risk children engaged less often in didactic teaching, showed less encouragement of their child's activities, and their attempts to control their child's activities more often resulted in failure. In general the high-risk children appeared to experience much poorer opportunities for behavioural competence development than other children of low SES. A second study (Wilton & Irvine) was concerned with the diets of cultural-familial retarded children. The retarded children showed lower intakes of almost all basic nutritional substances than other children of low or average SES, and the retarded group's intake of iron, calcium, and ascorbic acid were below National Academy of Science/National Research Council (1973) recommended daily allowance levels. Two related studies are currently

in progress. The first of these is a comprehensive survey of the family circumstances of cultural-familial mentally retarded children (McDonald & Wilton) and this should yield useful data on extant home and family conditions, and on the availability, suitability, and adequacy of current community services. The second study (Densem & Wilton) is concerned with the problem of identifying children at high-risk for cultural-familial retardation - early in life. For a variety of reasons such children are rarely identified before they reach school, and since early intervention programmes are neither necessary nor desirable (and almost certainly not feasible) for all low SES children who are at high-risk vis-a-vis cultural-familial retardation. The intention is to find a group of residential and community measures which will facilitate the identification of this group. Subsequently such measures could be used in conjunction with information from home observations (e.g., Caldwell, 1978) to determine target populations.

The School Years

Prior to 1970, conspicuously little research on New Zealand special educational provisions for handicapped or gifted children of school age had been undertaken (Havill & Mitchell, 1972). This state of affairs has changed somewhat over the past decade, although it is still apparent that educational and social policy/provisions are not formulated from, nor greatly influenced by, research findings. Several studies have been concerned with the characteristics of special educational classroom conditions. Shuker (1974) described the establishment, nature and operation of a secondary school adjustment class for children with behaviour disorders. Most of the pupils subsequently returned to regular classes, and questionnaire data from teachers and former pupils of the class, and from teachers of regular classes in the same school, indicated that the class programme had been effective.

Bray and Wilton (1975) surveyed the classroom behaviour of intellectually handicapped special school pupils and their teachers. It was found that the pupils spent a high proportion of classroom time in behaviour deemed appropriate by their teachers, but that the teachers' interaction with the children was relatively infrequent. The results raised the possibility that most of the observed pupil behaviour in

the classroom consisted of well learned responses which required very infrequent reinforcement (and interaction) on the part of the teacher to be maintained at the high levels recorded. Clearly, an examination of pupils' gains in special school classrooms and an analysis of the characteristics of classroom tasks vis-à-vis the extant behavioural development (cognitive, academic, etc.) of the pupils would be a useful next step.

Glass (1977) examined the descriptive characteristics of special class pupils and teachers, and the curriculum materials and advisory services used by special class teachers. Questionnaires were sent to a random sample of 37 primary and 11 intermediate special class teachers (approximately 20 percent of the national total) and the results were compared with *New Zealand Yearbook* data on regular classes. A useful tabulation of information was obtained and in general the results suggest that special classes in New Zealand schools may not be as *special* as they should be. Two additional findings also provide cause for concern. The incidence of Maori children in special classes was found to be approximately four times the level in the general population, and less than 7 percent of the children in the classes surveyed had been returned to full-time regular class attendance. Both of these matters (and others raised in the study) certainly warrant more detailed examination.

Cosson (1978) undertook a series of three studies of the language development of primary special class pupils. A survey was made of the gains over six months in receptive and expressive language on the part of special class pupils, and high- and low-gain classes were identified on this basis. Observations were then made of the classroom behaviour of pupils and teachers and the amount of time the children spent in language-related classroom activities, and the extent and manner in which the teachers monitored the children's activities were determined. Marked differences were evident between special classes with respect to the language gains made by the pupils (Study 1), and differences in pupil and teacher behaviour clearly differentiated high- and low-gain classes. The children in classes which showed high gains in receptive language (Study 2) spent more time than their low-gain counterparts in reading and directed writing activities, and the high-gain teachers devoted less classroom time to administrative activities than did low-gain teachers.

With respect to expressive language (Study 3), children in high-gain classes spent more time in informal language activities than low-gain children, and less time in teacher-directed language activities and in attending to others, while the high-gain teachers spent less time in neutral class and group instruction than did low-gain teachers. In view of the likelihood that most special class pupils would be cultural-familial mentally retarded and would thus probably lack adequate language learning opportunities at home, and given the importance of adequate spoken language as a requirement for successful social and vocational adjustment, more comprehensive examination of the reasons for interclass variability in the language gains of special class pupils seems appropriate. In the case of low-gain classes at least, the need for more vigorous attention to the development and implementation of *effective* special class language programmes seems to be indicated.

A study of work-experience programmes was undertaken by Wilton, Vincent & Keeling (1979). It was found that the classes differed significantly with respect to the amounts of classroom time allocated to particular areas of the curriculum, but that all classes spent most classroom time working at basic academic skills or with specialist teachers, and all spent a conspicuously low proportion of time in either work-experience related activities, or in social/community studies - activities which would be expected to feature prominently in work-experience programmes.

Two studies of the education of hearing impaired children have been made by VandenBerg. The first (VandenBerg, 1971a) was concerned with the written language of children in New Zealand schools for the deaf. A noticeably depressed level of language achievement, distorted patterns of language, and problems in the development of abstract thought were evident in the children (results which were closely comparable with U.S. norms) and the findings raise a number of questions regarding the appropriateness of current teaching strategies and provisions for deaf children. The second study (VandenBerg, 1971b, 1972) was focused on hearing-impaired children who were attending regular classes. It was found that the hearing-impaired children were not making good academic progress, and a noticeably high proportion of the children were found to be leading lonely and socially restrictive

lives, devoid of close friendships. The results indicated that the children required more attention and help than they had previously received.

Parents' and teachers' evaluations of special educational provisions for handicapped children provide a further useful perspective on current conditions. A study of Page (1974) indicated that parents of special class children, those of regular class children, special class teachers and teachers of regular classes in primary and intermediate schools were supportive of special classes for mildly retarded children. Most of the parents of special class children felt their children had benefited from special class attendance, and most thought (wrongly!) that special class teachers had received specialized training. In general, special and regular class teachers believed that mildly retarded children received more individual help in special classes, and the need for special training of special class teachers was strongly advocated. While there was no support from teachers for abandoning special classes in favour of special (segregated) schools or completely 'mainstream' provisions, many of the teachers interviewed supported the part-time integration of special class pupils. Parental support for special classes was also obtained by Lai (1977). In this study the majority of mothers of special class pupils were supportive of special class provisions for their children and most believed the special class programme in their school had been beneficial. It would be interesting to examine the bases of decisions made by the parents and teachers in these two studies. It is indeed possible that parental and teacher support derived from an awareness of shortcomings of current regular class provisions and doubt with respect to the possibility of substantial change in the short-term.

Lane and Mitchell (1979) surveyed a group of 67 families, each of whom had one or more 'children with special needs' under 7 years of age. Approximately half of the parents surveyed regarded their contact with school psychologists as being 'of little or no help' as far as the welfare of their 'special' child/children was concerned. This result contrasted with the parents' ratings of the assistance they had received from other non-medical professional services (Crippled Children's Society field officers, visiting therapists, Society for Intellectually Handicapped

and Hospital Board social workers, and speech therapists. These results seem slightly more encouraging than those of the Morrison et al. (1976) study, where it was found that approximately 1/3 of families of (pre-school and older) intellectually handicapped children/adults made no use of advisory or practical services offered by voluntary agencies or government departments. A study is currently being undertaken by Gordon, Nuthall & Wilton of speech therapy provisions for intellectually handicapped children. Assessments are being made of the pupils' speech and language development, and parents' and teachers' ratings of the children's communication skills and difficulties and of the need for specialist services are being obtained. Clearly parents' views on the effectiveness or otherwise of current educational provisions for handicapped children must be sought, and their involvement in the education of their children acknowledged, encouraged, and incorporated into administrative and teaching strategies.

Another aspect of parent-teacher liaison is the possible involvement of parent volunteers as teacher aides in regular and special classrooms. This issue seems directly relevant to special educational mainstreaming concerns. There are certainly limits to the logistic capabilities of even the best classroom teachers, and it may be downright unrealistic to expect one adult to maintain the degree of contact with, and awareness of the progress of individual children in a regular classroom with 30 or even 20 children, which would seem essential for teaching and learning effectiveness. Certainly, such difficulties are made manifest when assurances of this nature are made mandatory as they are in mainstreaming provisions via Public Law 94-142 in the United States. There is also the possibility which seems especially pertinent with young children, that the presence of a single adult in a classroom - directly accountable only to the children, may not be in the best interests of either the children or the teacher. Moreover, the involvement of parents in the education of their children (at school that is) has been a feature of New Zealand education (at least in theory) virtually since the establishment of state educational provisions in this country. While a number of New Zealand schools already have considerable involvement of parent volunteers in the affairs of the school, it seems probable that currently the assistance of parents in classroom activities is not widely

sought. Such involvement is not without problems and is certainly not another example of 'the answer'. The issue raises the question of the role of the professional in societal services - a question which is already to the fore in medical, social work, and community mental health, etc., areas. It is being increasingly realized that professional skills are in limited supply and should be concentrated where they are needed most, and that the use of paraprofessional services and lay help, where it is appropriate and sufficient (or can be made so), should be maximized. Such a realization is not a carte blanche for a reduction in the size or quality of professional services (it is the writer's view that we certainly need more and better services!), but rather reflects an awareness of the necessity for fuller and better utilization of those professional services which are available. Fuller use of extant services will almost certainly highlight current training and service inadequacies, and these will clearly need to be rectified. As long as a teacher is seldom if ever in the position (because of logistic problems) to work on an individual basis in his/her classroom with a child having learning or 'special' difficulties, the necessity for him/her to acquire the professional competencies to work with individual children will not be apparent - and as an apparent luxury will thus probably not be promoted or acquired.

An examination of the possibility of maternal involvement in the education of mildly retarded children was also undertaken in the Lai (1977) study. Approximately 50 percent of the mothers interviewed said they would like to help in the education of their children and a similar proportion of special class teachers welcomed such help. It is interesting to note that the mothers' reactions seemed to be independent of the success or otherwise of their own schooling.

A preliminary study of the actual involvement of parents in classroom provisions is being made by Fillary and Wilton. A total of 30 primary school classes - each of which had a group of 1 to 3 children with serious reading difficulties, was identified. The classes were assigned at random to one or two treatment conditions or to a control condition. In 12 of the classes resource teachers visited the classroom on a weekly basis to help the class teachers formulate individual reading programmes for the children. The progress of the children was monitored each week and programme changes were made on the basis of this data. In another 12 classes,

parent volunteers were introduced. The parents had been trained in monitoring the children's reading progress and in working as teacher-aides in the classroom reading programme. Weekly observations were made of teacher and child behaviour during the reading programme in the 30 classrooms over a 15 week period and the results are currently being analyzed. A major objective of the study is to determine whether the presence of parents in classrooms results in changes in teacher and child classroom behaviour, and whether following the provision of additional teaching resources, class teachers increase the amount of individual help for the children with serious reading difficulties.

In general, studies of the characteristics of special educational classroom conditions provide few grounds for complacency and raise a number of questions which require examination. Despite the findings listed there is relatively little solid information on what is happening within current special educational classrooms and in the case of provisions for visually handicapped, physically handicapped, speech handicapped, and learning disabled children - no information at all!

A related issue which needs to be examined is the basis of special class admissions, and in particular the possibility that the characteristics of the classroom or the teacher a mildly handicapped child has may determine whether or not he or she receives special educational facilities. Smart, Wilton & Keeling (1979) found some support for this contention in a study of 32 regular class teachers. Half of the teachers had had a 7 to 8 year-old child transferred from their class to a special class, while the remainder had children of comparable age and ability in their classes but had not sought special class placement for these children. The teachers' ratings of the child's (in their class) need for special educational help did not differentiate the two groups of teachers but in comparison with referring teachers, the nonreferring teachers were significantly more in favour of mainstream provisions for slow learning children, they reported a higher percentage of low-achievers in their classes, and a higher proportion of them were married. The results provide some evidence that teacher characteristics, their perceptions of classroom conditions, and their beliefs about mainstreaming differentiate teachers who refer children to special classes and those who do not make such referrals. The extent to which such

differences influence special class placement decisions needs to be identified with more precision. Clearly, the special educational needs of special class pupils and those of pupils of comparable ability in regular classes may not be as sharply differentiated in terms of the pupils' behavioural characteristics as is commonly supposed - and in view of the nonprovisions for mildly retarded regular class pupils, acted upon in special educational policy.

The social development of handicapped children, and their social acceptance by nonhandicapped children (an important element of school and community adjustment) has been the focus of a number of studies. Smart and Wilton (1975) studied the social participation of primary special class children during unsupervised playground activities. Such children showed a lower level of social participation than children of equivalent age and ability who were awaiting special class placement, and both of the retarded groups showed lower social participation than nonretarded children of equivalent chronological age or mental age. The results raised the possibility that special class placement may actually inhibit rather than facilitate the social development of mildly retarded children. McLennan (1977) examined the unsupervised playground behaviour of intermediate special class pupils, and obtained similar results to those of Smart and Wilton (1975).

A study by Wilson, Wilton and McGeorge (1975) was concerned with the social development of special class pupils and children of comparable age and ability who were attending regular classes. In comparison with the regular class group, the special class pupils showed significantly higher maladjustment scores on the AAMD Adaptive Behaviour Scales and significantly lower scores on Piagetian measures of intentionality judgements. The results suggested that the special class pupils' relative lack of ability to take account of others' intentions contributed substantially to their social maladjustment. The possibility that special class admission/attendance was largely responsible for the lower performance and greater maladjustment of the special class group, however, could not be discounted.

An attempt needs to be made to delineate the reasons for lower social participation, greater social maladjustment and less adequate development of intentionality judgements on the part of special class pupils, and the possibility that special class placement in New Zealand may often not be in the best interests of mildly retarded pupils needs to be seriously considered. The fact that special class pupils typically live a considerable distance from the school and thus from other pupils, and the physical differences between special and regular classes (ranges of age and abilities of pupils in the classes, typical class roll numbers, name of class, etc. - and especially the fact that all special class pupils by definition are likely to have adaptive behaviour problems) and beliefs/attitudes on the part of regular class pupils and their teachers seem likely candidates in this respect.

The social development of hearing-impaired children was studied by Witheford, Wilton and Parsons (1974). It was found that children who, for administrative reasons, were returned from deaf-units (special classes) in regular schools to a special school (usually because of a fall in roll numbers below minimum levels necessary for class continuance) showed a degree of regression in their social adjustment (AB scales) and the regression seemed to be more marked in hostel-resident than in home-resident children. The results suggested that hearing-impaired children, who for some reason apart from their ability to cope are withdrawn from unit classes, will be better off in terms of their social development if they are transferred to another unit rather than returned to the special school and that if a return to the special school is administratively unavoidable, the children should be returned to units as soon as possible.

Studies of the effects of special educational provisions on the social development of handicapped children have thus far been confined in their focus to mildly retarded and hearing-impaired children. The results to date indicate that some aspects of current special educational strategies may not be in the best interests of the children concerned. Clearly while a better understanding of the nature and effects of current special educational provisions on the development of mildly-retarded and hearing-impaired children is required, the need for a similar focus on the social development of other handicapped groups seems both indisputable and urgent. At the same time, modifications of current provisions and

the effectiveness of alternative special educational strategies also need to be evaluated. Several studies in this category have been undertaken.

A series of studies was completed by Glynn and his colleagues (Glynn and McNaughton, 1975; McNaughton, 1974; Wotherspoon, 1974), in which behaviour analysis techniques were used to develop criterion-referenced measures of the reading and writing behaviour of special class pupils, and specific classes of reading and writing behaviour were systematically reinforced by the teacher. In both studies, dramatic improvement in the reading and writing of the children occurred and follow-up measures (approximately 2 to 3 months later) revealed the stability of the changes. The results seem noticeably superior to those characteristically obtained in special class programmes and indicate the usefulness of such procedures for assessing and facilitating the progress of special class pupils as well as other handicapped and nonhandicapped pupils.

A further study in this group was undertaken by Serjeant (1974) who found that differential social reinforcement techniques were effective in increasing appropriate classroom attending behaviour in special class pupils - those receiving differential social reinforcement and, interestingly, their classmates as well.

Studies which employed behaviour modification principles to reduce disruptive classroom behaviour were undertaken by Ellery, Blampied, and Black (1975) and by McNaughton (1975). The first study showed that both group-contingent and individual-contingent (token) reinforcement conditions effectively suppressed disruptive classroom behaviour in a special school for emotionally disturbed children, and similar results were obtained in the latter study where a single-subject reversal design (individual-contingent token-reinforcement) was used with a primary special class pupil. A similar study was undertaken by Fry and Thomas (1976). A token economy was found to be effective in reducing the inappropriate classroom behaviour of emotionally disturbed children in a special class and during the time children were in regular classes on a part-time basis. The children were subsequently returned to regular classes full-time, and conspicuously low levels of inappropriate behaviour were still apparent approximately two months after their return to regular classes. Clearly behaviour modification/analysis or precision-teaching techniques can make a useful contribution to the development of more effective special educational provisions and further research in this area could and should be undertaken.

Two studies have been concerned with the effects of 'mainstreaming' on the social acceptance and/or social interaction of handicapped children. Allen, Wilton and Ballard (1978) examined the social development of a group of former pupils of a special school for physically disabled children who had been transferred to regular primary and intermediate schools as part of an integration (mainstreaming) programme. The physically handicapped children and their nonhandicapped classmates showed very similar patterns of social interaction during unsupervised playground activities and similar levels of social acceptance (sociometric data and teacher ratings). The data indicate that the physically handicapped children had apparently made a successful adaptation to the physical, academic, and social demands of the regular school. The second study was undertaken by Lilly (1973) who was concerned with the integration of visually-handicapped pupils (most of whom were totally blind) in a state secondary school. Brief questionnaires administered to 17 pupils in a mainstream programme indicated that most pupils believed their integration experiences had been beneficial and the scholastic achievement (School Certificate marks, etc.) of the pupils was noticeably good. It should be noted that a further 8 pupils (those with additional learning difficulties) were not in the mainstream programme, but attended a special class in the same high school - with a limited amount of integration. Data on the effectiveness of the latter programme would also be very useful. It would seem, however, from the limited data available that mainstream programmes for physically or visually handicapped children can be reasonably successful. The variables responsible for such success can not be specified at present, but are of considerable interest and importance, and research focus on these should be intensified and sharpened.

Postschool Studies

Studies of the postschool adjustment of handicapped children are useful for a variety of reasons. Quite apart from their usefulness as a basis for decisions regarding social policy and provisions, such studies provide an 'end-product' yardstick for gauging the suitability and effectiveness of prior special educational and social provisions

during the developmental period (Birth to 18 years). Most New Zealand studies to date have been concerned with mentally retarded children and have followed in the tradition of Winterbourn's (1944) landmark investigation.

A study of the graduates of a residential school for mildly and moderately retarded boys was made by Keane (1972). An attempt was made to locate the total group (N = 218) of former graduates of the school and contact was made with the families of 198 of these (6 graduates had died prior to the study). Approximately half of the group were in open employment at the time of the study, less than 25 percent were in institutions (the majority of these being in either psychopaedic or psychiatric hospitals - only one subject was in prison), approximately 3 percent were unemployed, and the remainder were either attending day schools or sheltered workshops. The results for the total group only are presented and it is not possible (from the report) to examine separately data for mildly and moderately retarded groups.

Stewart and Wilton (1977) examined the postschool adjustment of graduates of schools for intellectually handicapped children. The total group of former pupils of the two Christchurch schools who had graduated during the period 1965 to 1976 were surveyed. Approximately one-fifth of the graduates had been institutionalized and the parents' preference for the facilities available in the institutions appeared to be the main factor in their decisions to institutionalize their children. There was a suggestion, however, that graduates from higher SES homes were more likely than their low SES counterparts to enter an institution. Of the graduates who lived in the community, approximately 75 percent were in sheltered employment and the graduate's level of mobility seemed to be an important factor in their employment status. The graduates in sheltered employment were noticeably better off in terms of community integration and recreation and their parents made less use of community support services. It was noticeable that not one graduate was in open employment (either at full- or under-rate wage levels) - a result which at least initially would seem to indicate that employment opportunities available to Christchurch graduates are somewhat restricted.

Several studies have been made of mildly retarded special class graduates. A study of Otago work-experience graduates was undertaken by Wilden (1974). It was found that while 84 percent of the graduates surveyed (N = 85) were in open employment, integration with the community for many of the graduates was noticeably limited and there seemed to be a clear need for additional community provisions. Similar findings were obtained by Cosson and Wilton (1977) from a survey of Wellington special class graduates. The postschool adjustment of persons who had graduated from work-experience programmes was compared with that of three other groups: persons who had graduated from intermediate special classes; persons who had graduated from a regular secondary school (low stream) class after promotion from an intermediate special class; and a group of 'slow learners' (who had been referred by their teachers for placement in a work-experience class but had not been admitted following their assessment by school psychologists (WISC IQ range 78 to 90). Approximately 85 percent of the mildly retarded group and 90 percent of the slow learners were in open employment, but the mildly retarded groups were noticeably less well off than the slow learners in terms of both employment (lower job status, shorter job tenure and lower wages) and social adjustment, and their poorer achievement appeared to be virtually independent of the types of special education they had experienced.

Vincent, Wilton and Keeling (1979) found that little more than half of the graduates in Christchurch work-experience classes were in open employment six months after school graduation. Comparisons were made between the four work-experience programmes operating in Christchurch and the graduates of one school (School X) appeared to have made a somewhat more successful employment adjustment than the graduates of the other three schools. It is interesting to consider these results in conjunction with those obtained in the study of work-experience programmes (Wilton, Vincent and Keeling, 1979). It is noticeable that in School X the pupils spent more classroom time in work-experience activities than the pupils of the other schools. Clearly the low proportions of time spent in work-experience and social activities (which was found to characterize *all* work-experience programmes), and the relatively low rate of employment observed in programme graduates may

well be connected. The results at least raise questions about the appropriateness of extant programmes in Christchurch work-experience classes. The securing of open employment by handicapped children is of course very much dependent upon the adequacy of current economic conditions. Over the past decade a number of serious difficulties have been apparent in the New Zealand economy (Pryde, 1979) and it is probable that the operation of these factors is reflected to a degree in the Christchurch follow-up study.

The need for educational provisions for mentally retarded children (and other handicapped groups) beyond the school years is a further matter which will need to be examined. A case study by Codd and McIlroy (1979) was concerned with the effects of a reading clinic programme on the language development of a special class graduate. The subject had shown expressive-aphasic symptoms from an early age and the programme was focused on these difficulties. After 18 months in the programme, the subject showed sizable gains (approximately 2 years) in reading skills, and interestingly, very substantial gains in expressive language development. The study indicates that specific language difficulties and mental retardation are sometimes interrelated and that teaching strategies which take account of such difficulties can be very effective. It would indeed be useful to know the extent to which specific language/speech difficulties characterize mildly retarded and intellectually handicapped children. Given the limited access which such children currently appear to have to regular speech therapy services, some changes in specialist provisions might need to be considered. The results of this study also suggest that special class graduates do not stop being able to learn when they leave school and if this example is reasonably typical, as seems likely, postschool educational provisions for mildly retarded children should certainly be seriously considered.

The remaining study of postschool adjustment was undertaken by Thompson (1974) who was concerned with the social aspects of employment of the deaf. A group of 31 deaf adults and a random sample of 50 Auckland employers were interviewed. All of the deaf adults were in open employment and most had graduated from a special school for the deaf. While a wide range of jobs were apparently available to deaf persons, the data suggested that pupils who graduated from a special school had not been given adequate preparation for employment and postschool adjustment. An examination of the nature and characteristics of programmes currently operating

in schools and special (unit) classes for deaf children seems a logical next step.

There is a clear need to examine the employment and social opportunities available to intellectually handicapped and mildly retarded school leavers, as well as those available to other special educational graduates. There is also a need to examine the content and conduct of extant special educational and after-care provisions for handicapped children. Studies to date provide no grounds for complacency regarding current provisions - especially with respect to mildly retarded children, and the lack of information on other handicapped groups is both conspicuous and lamentable.

Current State of the Art

In the past decade research on special education in New Zealand has shown modest but noticeable growth. It is equally clear, however, that like Thursday's child it has far to go, and that there is a need for a very considerable expansion of special educational research activities at preschool, school and postschool levels. Perhaps the most urgent need is to document fully what is currently happening with respect to special educational and social provisions for exceptional children during the preschool years, in schools and other educational institutions, and in the postschool period. Such documentation would need to include a specification of who is currently receiving (and not receiving) special educational provisions and on what basis, and a determination of the effectiveness or otherwise of extant provisions. Most research to date in New Zealand special education has been psychological in nature. Clearly there is also a great need for sociological and politico-economic analyses of special educational conditions, policies and issues.

Several issues which at present occupy centre-stage in overseas special educational research have already reached New Zealand in one way or another and will also need to be addressed more vigorously in the near future. The issue of mainstreaming has already been mentioned. It needs to be realized that pressure for mainstream special educational provisions in the United States came largely from parents of handicapped children who were dissatisfied with traditional special educational provisions for their children, and frustrated over bureaucratic protection of the status quo. Whether similar pressures will emerge in New Zealand

is unclear. If current facilities are not as 'special' as they need to be however, and if the just concerns of parents are not heeded through lack of knowledge of, and/or interest in this situation, a replication of the U.S. situation seems a highly probable outcome. There is a need to look carefully and critically at the legal protections for children and families in current educational and special educational legislation.

A group of solicitors with whom the writer has been associated has been considering the need for changes in the current legislation - at present the rights of the professionals are very far-reaching, while those of the parents are noticeably difficult to discern. At the same time, the courts are clearly not a suitable place for deciding on the appropriateness of particular special educational strategies - a situation which has occurred and is occurring in the United States. If quality special educational provisions for exceptional children can not be assured, however, the need for careful legal protection of children's and parents' rights is essential. There is a clear need to develop quality special educational provisions in New Zealand. Such development would clearly include quality teacher training and retraining as well as the development of appropriate specific special educational curricula, and evaluation of programme development (via empirical research) should be included as an essential component of the enterprise. All of this is not meant to imply that mainstreaming is merely another 'gimmick'. There has been a widespread realization of the importance of maximizing the social contacts between exceptional and other children so that the social learning difficulties of exceptional children are not exacerbated at preschool or at school as a result of exclusive exposure to, and interaction with, other atypical children, and so that reciprocal understanding between exceptional and other children (and their parents/teachers) can be facilitated throughout childhood. As mentioned at the outset, mainstream special educational facilities can not be considered in isolation from the quality of extant regular class provisions for all children, and can not be expected to work as well as, or better than traditional facilities unless they are in fact (as well as name) special. A very considerable expansion of research on the development and evaluation of mainstream special educational provisions is needed.

The provision of early intervention programmes for handicapped children has also been considered, and clearly there is an urgent need for an expansion of research attention to the development and evaluation of such programmes in New Zealand. A related issue which will also need to be considered is the interface between early intervention and school provisions for children with special needs. It seems probable that to the extent that effective early intervention provisions can be developed for children with special needs, the nature of their subsequent school special educational provisions will need to be reconsidered and modified if the impetus of effective early intervention is to be maintained and consolidated.

It is clear that research in New Zealand special education is almost exclusively a university enterprise - either theses, dissertations or staff research. It is equally clear that such a basis is insufficient for the research needs in this area, and that the involvement of a wider section of the educational and special educational community in special educational research is essential. The advocacy of such involvement presupposes a willingness on the part of special educators to undertake research and an acknowledgement by such persons of the necessity for those who wish to engage in research to acquire the necessary competency to undertake research, or to obtain the advice and assistance of those who already have it. While poorly conducted research may well be preferable in general to no research at all, it will certainly not provide a useful basis for educational or social decisions and may well confuse rather than clarify the issues at stake.

One of the problems which may be limiting the integration of research and policy/practice in New Zealand special education is the relative non-availability of research-oriented journals to New Zealand special education teachers and administrators. The major avenues of publication of relevant research on New Zealand special education are four New Zealand journals - *The New Zealand Journal of Educational Studies*, *Mental Handicap in New Zealand*, *the New Zealand Speech Therapists Journal*, and *The New Zealand Journal for Teachers of the Hearing Handicapped*; and three Australian Journals - *The Exceptional Child* (formerly *The Slow Learning Child*), *The Australian Journal of Special Education*, and *The Australian Journal of Mental Retardation*.

These journals would seem to provide sufficient space for the current volume of New Zealand special educational research - though if this volume was to increase (as is to be hoped) the need for an expanded local avenue of publication would soon become apparent. Thought certainly needs to be given to ways of increasing teachers' and administrators' access to available research information. At present relevant journals are held by most university and Teachers College libraries and the Department of Education Library in Wellington. Costs of journals are certainly increasing but perhaps these could be maintained or even substantially reduced if circulation could be increased. If sufficient inducement was given to schools and School/Education Boards to purchase at least some of the relevant journals (perhaps some forms of sharing arrangements could be developed!) - and to consult them, the benefits would probably be very widespread.

The current state of the art of special educational research is probably best described as 'distant', i.e., conspicuously removed from the area in which significant educational and social decisions are made. Perhaps the word 'esoteric' would characterize the activity of special educational research in the minds of many New Zealand teachers and special educational administrators. It would appear that special educational research is not viewed by either of these groups as an essential basis for programme or policy decisions. If this is the case, it is certainly not a problem which is exclusive to educational research - nor should it be viewed as a peculiarly New Zealand educational problem. Indeed a gap between educational researchers and practitioners/administrators almost certainly characterizes the status quo of educational systems in most if not all western countries. The fact is that relatively few administrators or teachers have the necessary background to interpret research studies, and even if a bigger proportion had such a background the current store of knowledge is lamentably inadequate as a basis for classroom or policy decisions. Clearly the two problems are linked - there is a limited store of knowledge *because* relatively few teachers or administrators are equipped to undertake or interpret educational research. The problem is thus partly cognitive, i.e., there is a clear need to achieve a better level of research literacy on the part of teachers and administrators. At the same time, it is

abundantly clear that the problem also has attitudinal aspects. It is one thing to be able to undertake or interpret research studies and quite another to view such activity as an essential basis for classroom and policy decisions. A question which must be addressed is 'what currently determines the classroom and policy decisions of teachers and administrators?' It is to be hoped that sensitivity to consequences of administrative or teaching strategies is an essential component of the current *modus operandi* of special (and regular) education teachers and administrators - especially in the case of changes in particular teaching and administrative strategies implemented by such persons.

There is perhaps a widely accepted belief among administrators or teachers 'that in the last analysis, each of us stands alone', and that they should thus evaluate their own actions in the light of their particular (and unique) experience. Such a frame of reference would certainly lead to a preference for introspective and subjective evaluation of actions. To some extent, such an attitude is wholly commendable and it is indeed part of what we usually understand to be a characteristic of a truly professional teacher or administrator. It is also true that nomothetic research can never tell a particular individual what they should or should not do in a particular teaching or administrative situation with particular children (Coladarci, 1956). It is equally true, however, that teachers or administrators do not stand completely alone, but are a part of a network of influences on children and that the effect of particular administrative or teaching strategies must be considered in the light of other extant influences. As teachers or administrators we are thus typically in the position where we are unable to tell from our experiences or perceptions (leaving aside the problem of their complexity as data) what the consequences of teaching or administrative strategies are, and to the extent that this is true we need to get outside our own perspective to find out what is happening or what has happened. In one sense educational research (including special educational research) is merely a systematic way of finding out such things.

At present relatively little educational research is being done in New Zealand (i.e., in comparison with agricultural research, medical research, etc.) and undoubtedly New Zealand special education reflects this fact. It seems very likely that very little expansion of special

educational research will occur unless teachers and administrators understand the necessity for it and have better access to research information, and unless more teachers and administrators become actively engaged in the research enterprise. The New Zealand Department of Education has recently expanded its research staff, and it is at least possible that education boards will make similar appointments. Hopefully the activities of staff appointed will contribute noticeably to future developments in policies and provisions. It would indeed be a tragedy, however, if Department and Education Board officers were led to believe that 'research isn't their line' and 'is best left to the boffins'. What needs to be appreciated by educationalists at all levels is that we all need what research can yield. We must certainly be aware of the limitations of research, but it is equally if not more important that we are aware of our own gnostic limitations - an awareness which objectivity should reveal and compel us to heed, in special education, and in education generally.

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